Executive Summary

In Executive Order #106 (June 14, 2005), Governor Doyle created the Governor's Task Force on Waste Materials Recovery and Disposal and gave it the following mission:

- To study and make recommendations regarding the economics of landfilling and recycling solid wastes, including the full environmental costs and benefits, and the extent to which they are reflected in prices and associated fees collected by the state.
- To review the extent to which materials with economic value are lost to landfilling and to recommend ways to maximize the productive use of waste materials, including materials recycling and composting.
- To study and recommend ways that Wisconsin can minimize the generation of waste materials including, incentives for waste material reduction and reuse.
- To study the current management of toxic and nontoxic solid wastes and to recommend ways to ensure that these wastes are managed in a manner that minimizes present environmental impacts and potential burdens to future generations.
- To consider the role of Wisconsin municipalities, businesses and residents in the use, management and disposal of waste materials.

The Governor further instructed the Task Force to generate a "comprehensive strategy" for dealing with waste generation, recovery and disposal issues. In doing so, the need for a clear statement of goals – or vision – became apparent. In order to provide an overall context for its recommendations, therefore, the Task Force developed a statement of its vision for solid waste and resource management in Wisconsin.

Simply put, the objective is to move towards ecological and environmental sustainability through a series of complementary actions designed to minimize waste generation, maximize the recovery of resources where economically viable, and dispose of the rest by means that protect human health and the environment, simultaneously working to minimize total financial, social and environmental costs. Our vision for Wisconsin, therefore, can be stated as follows:

> **In a manner designed to minimize environmental, economic, and social costs to the residents of Wisconsin and beyond, the State of Wisconsin shall achieve and maintain an integrated materials management system consisting of enhanced producer responsibility for products, effective resource recycling and recovery, and responsible waste disposal – all designed to promote ecological and environmental sustainability.**

We can elaborate further by discussing the meaning of certain key phrases in the vision described above.

"In a manner designed to minimize environmental, economic, and social costs" means that policies, regulations, and corresponding activities should be developed and implemented first with a true understanding of environmental, economic, and social costs and second in a manner designed to minimize total costs.

In at least some cases, the "true" cost of creating a product is not borne by the manufacturer, but by the entity required to deal with its disposal. This may result in additional costs to Wisconsin consumers and communities, including both current and future generations, or it may place a significant burden on municipal and private resources responsible for

waste recycling and disposal. A fair assessment of the "true" environmental cost of product creation, consumption, and disposal – cradle to grave – is necessary to assure that those who benefit from the manufacture, sale or purchase of a product share in the cost and consequences of disposal as well.

Moreover, simple comparisons may not adequately reflect complex economics. A $30 landfill tipping fee, for example, in all likelihood cannot be compared to, say, a $45 unit cost for recycling by a particular municipality. One has to determine whether they both account for necessary expenses like collection and transportation. Does the recycling "cost" include the offsetting value of materials sold for recycling? Are environmental impacts - both current and long-term - included? In such cases, there has to be an apples-to-apples comparison to evaluate the cost of various waste management options, The Task Force believes that the "true cost" of specific waste management decisions should play a significant role in future policy-making.

"Integrated materials management system" means a system of policy and regulatory requirements designed to work together in a series of complementary actions to direct the conduct of producers, consumers, and waste handlers so that each one anticipates the conduct of the other and acts to minimize waste generation, maximize the recovery of resources where economically viable, and dispose of the rest by means that protect human health and the environment.

"Enhanced producer responsibility for products" means that the fate of any given product after use is accounted for in product design, manufacturing, and distribution. Manufacturers are already responsible for environmental impacts associated with the production of their products. As things now stand, however, this responsibility typically ends once a product is sold. Enhanced product responsibility would require, first, that the amount of toxic and hazardous components be substantially reduced if not eliminated, and second, that manufacturers would design, manufacture, and distribute products in a manner designed to promote reclamation and to minimize the need for disposal.

Action by Wisconsin businesses and consumers to promote a more circular approach from raw materials to product back to raw materials for other products (rather than a linear movement from product towards waste and disposal) could result in benefits both within the state and in Wisconsin's competitiveness in a world market. The increasing volatility of energy and raw material prices will eventually require attention and force this change anyway. Leveraging the state's manufacturing experience in combination with research and development by the university and technical college system could accelerate this movement.

"Effective resource recycling and recovery" means the development and enforcement of effective programs to identify the useful components of solid waste, to sort and recover such resources, and to develop markets for recovered resources. An effective program for resource recycling and recovery is likely to require regional cooperation.

This is a report by a Task Force charged with addressing "waste" issues and the word "waste" appears frequently in the text. The Task Force recognizes, however, as must Wisconsin's residents and business leaders, that "waste" discarded instead of recycled or recovered can turn out to be a resource lost. While landfills play a valuable and necessary role in the waste management system, the value of material placed in a landfill is greatly reduced except for energy that may be recovered by capturing gases from decomposing waste for the generation of electricity. Every product or package we landfill represents manufacturing production (including

raw materials and energy) that is effectively lost. The current solid waste system must evolve from one designed for disposal to one optimized for recovery and reuse. Better still, we should, where we reasonably can, prevent the waste from being generated in the first place.

"Responsible waste disposal" means disposal only when necessary, and then in a manner designed to minimize environmental impacts. Landfills, for example, should be designed and operated to minimize the need for engineering controls after the landfill is closed.

"Ecological and environmental sustainability" is fully achieved when we find ways to meet our resource and energy needs today without compromising the ability of future generations to meet their needs as well.

A Step Forward

There is precedent in Wisconsin to achieve a vision such as this creatively and forthrightly. The State Seal with the word "Forward" exemplifies Wisconsin's historic leadership in environmental and consumer protection, strong infrastructure supporting economic development, and research and outreach by its education system. The Task Force hopes that this report is another step "forward" in the protection of the environmental and economic interests of Wisconsin.

How is conduct changed in away that moves us towards the vision established by the Task Force? The Task Force sought to acknowledge and, where appropriate, take advantage of the following forces:

Market Forces

Certain market forces are moving us towards a more integrated system anyway. Producers reduce packaging, for example, or their reliance on more exotic and expensive components, not to reduce waste necessarily, but simply to reduce the cost of production. Producers are still driven by costs. Reducing costs can increase profits.

Good Will

Producers may perceive some competitive advantage by offering so-called "green" products. Certain consumer trends tend to favor products designed to promote recovery or to minimize environmental impacts upon disposal. Or, producers in certain industries manage their own "take-back" programs, which facilitate the recovery of certain problematic wastes as, for example, can be found in many electronic goods.

Legislation and Regulation

Where necessary, the government can step in to force conduct designed to make the whole system work better. This might take the form of incentives to encourage desirable conduct or mandates and penalties where more aggressive action is required to direct or prohibit other forms of conduct.

Market forces and good will tend to function on their own, so the Task Force has focused on recommendations involving legislation, rule-making, and actions by stakeholders designed to contribute to an integrated overall system for effective materials management.

Funding

The issue of funding is a sensitive one. The Task Force is wary of unfunded mandates. In many respects, recommendations set forth in this report, to the extent they reorganize current programs, may not require net additional funding. At the same time, the Task Force recognizes that the implementation of its recommendations as a comprehensive package will require additional funding. Although based on rough, order-of-magnitude calculations, the level of funding required to implement the recommendations in this report is likely to range from $6 million

to $10 million in the first year and $5 to $7 million annually thereafter.

The Task Force, composed as it is by members with diverse views on taxes, fees, and related matters, found it challenging to recommend a mechanism for funding the implementation of its recommendations. We have assumed that general purpose revenue is unlikely to be made available for waste management programs.

Most recycling and waste reduction programs are funded through a non-lapsable trust fund, which is commonly referred to as the "Recycling Fund." The Recycling Fund receives revenue from a recycling surcharge on certain tax liabilities and a landfill tipping fee. The Recycling Fund, in turn, is used to support a variety of services, including administrative staffing, recycling demonstration grants, and grants to local units of government responsible for recycling programs (called "Responsible Units" or "RUs").

As reported by the Wisconsin Legislative Fiscal Bureau and the Department of Natural Resources (DNR), the revenue generated for the Recycling Fund generally exceeds expenses, in some years by more than $10 million. The figure varies with each budget cycle, but there has consistently been a surplus in this account. A pattern has developed by which significant portions of these surplus funds have been diverted to the general fund for budget balancing purposes. According to the Legislative Fiscal Bureau and the DNR, the amounts transferred in 2003-04, 2004-05 and 2005-06, for example, were roughly $7.3 million, $6.8 million and $22 million, respectively.

Based on current projections, these funds, if retained for use on waste reduction and recycling initiatives as set forth in this report, would be adequate to implement and sustain these recommendations in the coming years. Indeed, as set forth in Recommendation A3, the Task Force urges the Governor and Legislature to preserve these funds for use as intended on waste reduction and recycling initiatives in general and implementation of these recommendations in particular. With such action, these recommendations as a whole can be implemented without the need for additional taxes or surcharges. The Task Force believes that this is a significant factor and one that supports the implementation of these recommendations as soon as possible. This will accelerate efforts to achieve a fully integrated solid waste management program in Wisconsin.

Recommendations

One final word before presenting the Task Force recommendations. There is no silver bullet. An effective state policy likely depends on a wide range of actions and a combination of measures designed to achieve overall state objectives. What is required to achieve these objectives will change over time, just as markets and public habits will change, and the state must be prepared to adapt over time as well. A creative and flexible approach will help Wisconsin adhere to its proud history of effective management of natural resources.

Task Force recommendations are set forth according to the concepts set forth in our Vision Statement. This reflects, in our view, a logical presentation of actions necessary to implement an integrated system that manages the diverse stages of waste generation, handling, recycling, and disposal. In the report that follows, each recommendation is preceded by a discussion designed to provide background information relevant to the recommendation itself. Along with other sections of the report, these discussions provide context for policymakers as steps are taken to implement these recommendations.

A. Minimize Environmental, Economic and Social Costs

A1. **Improve and expand the use of economic analysis in solid waste policy and management decisions.** The objective is to base

policy and regulatory decisions on recognition of the full social costs and benefits of alternative strategies, including external costs and benefits. Steps to be taken include: (a) increasing the expertise of environmental and conservation staff with training in environmental economics, (b) adding an environmental economist to the DNR, (c) conducting economic research that directly addresses emerging solid waste policy and regulatory issues, (d) establishing pilot projects to evaluate the efficacy of alternative incentive-based mechanisms, and (e) factoring external costs beyond state boundaries into Wisconsin policy decisions on solid waste management.

A2. **Promote effective solid waste planning and implementation as well as regional cooperation for both.** The current state framework fails to reflect certain key characteristics of "integrated solid waste management," which should include planning and management for all forms of solid waste, from recycling to household hazardous materials to the siting of landfills and incinerators. As a result, fractured and disparate services are available through programs that fall far short of a fully integrated system. Steps to be taken include: (a) conducting pilot studies to evaluate options for comprehensive solid waste planning, The objective is to base policy and regulatory decisions on recognition of the full social costs and benefits of alternative strategies, including external costs and benefits. Steps to be taken include: (a) increasing the expertise of environmental and conservation staff with training in environmental economics.

A3. **Preserve funds generated by the Recycling Fee and appropriate them to implement these recommendations and other solid waste reduction and beneficial reuse programming.** The objective is to preserve all funds generated through the Recycling Fee to implement recommendations set forth in this report. Steps to be taken include: (a) banning diversions from the segregated fund so that monies raised from the Recycling Fee are preserved for their intended purposes, and (b) appropriating all revenue from the segregated fund to implement these recommendations and other recycling, beneficial reuse and waste reduction programs.

A4. **Modify the formula for grants from the Recycling Fund to meet the needs of RUs more effectively.** The current formula used to distribute grant monies prevents many RUs from obtaining all of the funding they might be eligible to receive. This has resulted in both under-funded RUs and, in some cases, over-funded RUs. Steps to be taken include: (a) modifying the formula used to calculate the distribution of RU grant monies to assure equitable distribution among RUs and to more adequately meet the cost of effective recycling programs and other waste reduction and beneficial reuse programs, and (b) incorporating additional recycling and beneficial reuse programs into the matrix of allowable expenses for reimbursement under the terms of an RU grant.

B. Enhance Producer Responsibility for Products

B1. **Maximize the collection and reuse of discarded electronic devices.** The goal is to eliminate disposal of electronic waste through state legislation consistent with similar initiatives in the upper Midwest. Steps to be taken include: (a) establishing state policy, consistent with policies in neighboring states,

to promote environmentally sound recycling and reuse of discarded televisions, monitors, laptops and desktop computers, and (b) banning the disposal of such devices by the end of 2010. The resulting policies should not unduly burden government and should embrace principles of shared responsibility among consumers, producers and state and local governments.

B2. **Require effective product stewardship (producer responsibility for the fate of their products).** The goal is to extend producer responsibility to include end-of-life costs associated with recycling and disposal. Steps to be taken include: (a) promoting voluntary practices by industry to recover, reclaim and recycle products at the end of their life cycle, (b) establishing mandatory product take-back and collection programs in all cases where such programs are cost effective compared to other systems for recycling, (c) prohibiting the use and incorporation of toxic materials in electronic and other products, and (d) supporting the establishment of accessible recovery facilities.

C. Promote Effective Resource Recycling and Recovery

C1. **Recover more construction and demolition debris and other sources of wood waste.** Construction and demolition (C&D) debris represents approximately 28.7% of Wisconsin's municipal solid waste (about 1.4 million tons per year). Other wood waste (e.g., branches, pallets) constitute another 2.9%. The objective is to recover as much of this waste as possible for beneficial reuse. Steps to be taken include: (a) initiating market development and research on the recovery and reuse of C&D waste and supporting the development of an infrastructure for recycling and marketing C&D waste in general and clean, untreated wood in particular, (b) promoting the adoption of local ordinances to require C&D recycling as part of the construction permitting process, (c) removing regulatory barriers to waste reduction, reuse and recycling where environmentally appropriate, and (d) instructing the Wisconsin Department of Transportation to determine whether and how shingles can be safely incorporated into road construction projects and recycled wood can be used for highway beautification and erosion control projects.

C2. **Recover more scrap paper.** Unrecovered paper represents approximately 20.8% of municipal solid waste (about 990,000 tons per year). The goal is to recover more waste paper for productive use and to reduce the amount of usable paper in landfills to less than 15% in five years and less than 10% in ten years. Steps to be taken include: (a) increasing and promoting household and business recycling of all recoverable paper, (b) making recycling easier, (c) increasing education on the value of recovered paper as a resource, (d) creating stronger incentives and penalties for waste paper management, and (e) reducing the contamination of recoverable waste paper.

C3. **Reduce and recover more organics.** Food residuals constitute 10.2% of total municipal solid waste and food-soiled compostable paper constitutes another 4.8% (about 487,000 and 228,000 tons, respectively, per year). The goal is to increase the diversion of food residuals, food soiled paper, and clean wood, referred to here as "source-separated organics," from disposal for composting or other productive use. Steps to be taken include: (a) identifying sources of source-separated or-

ganics in Wisconsin's municipal solid waste and promoting education on options for reduction and diversion, (b) initiating research into composting organics from commercial properties, (c) developing and promoting a hierarchy for the recovery of source-separated organics, and (d) developing a strategy to reduce barriers and increase the safe diversion of source-separated organics.

C4. **Recover more waste generated by commercial properties.** The objective is to recover more waste from commercial sources, as opposed to residential sources, for purposes of effective resource collection and to reduce overall disposal of these materials. Steps to be taken include: (a) increasing education and information to Wisconsin businesses on what is required to be recycled, and (b) increasing the effectiveness and enforcement of current recycling ordinances through the development of business recycling plans.

C5. **Re-examine the feasibility of a beverage container deposit law.** As many as half of the beverage containers generated in Wisconsin remain unrecovered through conventional recycling programs based on curbside and drop-off collection. For 2005, the DNR has estimated the economic value of recyclables that are landfilled at $21 million for aluminum cans and $19 million for plastic containers. The objective is to optimize the recovery of all types of beverage containers in order to save resources and energy and to minimize the disposal of these materials. The principal step to be taken is to determine the most effective program attributes and plans for a beverage container deposit law that will work in Wisconsin in concert with existing recycling programs.

C6. **Conduct statewide waste generation and disposal studies at least every five (5) years.** In light of the potential for additional changes in the characterization and composition of waste relating to such things as new products, changing consumer habits and related matters, an accurate understanding of the solid waste stream is necessary to develop effective management policies. The goal is to avoid significant, unexpected changes in the solid waste stream before management systems are in place to handle changes in a responsible manner. The principal step to be taken is to mandate statewide waste generation and disposal studies every five (5) years.

D. Promote Responsible Waste Disposal

D1. **Enhance regulation of construction and demolition debris landfills.** DNR studies suggest that leachate collected from C&D landfills contains sulfate, manganese, chloride and other potential contaminants. Odor and risk of gas migration from hydrogen sulfide is a concern. The objective is to increase protection of human health and the environment by enhancing regulation of C&D landfills. Steps to be taken include: (a) evaluating the extent to which existing C&D landfills are adversely impacting the environment, and (b) upgrading Administrative Code requirements for C&D landfills as appropriate.

D2. **Assure adequate financial assurance by landfill operators.** Three primary types of financial assurance apply to Wisconsin landfills - closure, long term care and remediation. The goal is to ensure that the owner financial responsibility system - on both a short and long-term basis - is protective of the environment and minimizes liability to the citizens of the State of Wisconsin. Steps

to be taken include: (a) defining a period for proof of financial responsibility consistent with how long funding should be available for long-term care based on design and operating parameters, (b) providing for accessible and reliable remediation coverage for active and closed sites, (c) evaluating alternative means, such as a state insurance pool, of providing for long-term care and/or remediation at landfills, (d) ensuring uniform enforcement of current and future requirements for financial assurance, (e) eliminating the net worth option as a financial assurance mechanism, and (f) evaluating whether cost estimates used by the DNR in financial assurance calculations are adequate to assure the availability of funds when the need arises and, if not, implement necessary changes.

D3. **Revise the waste facility siting process.** The objective is to improve public participation in the local siting process and to revise and simplify certain aspects of the landfill review process for regulatory approval. Steps to be taken include: (a) ensuring adequate and representative public participation in the local siting committee process, (b) educating the public on the roles of the siting committee and the local governmental body, (c) studying whether the needs analysis can be streamlined and made more effective, and (d) studying aspects of the landfill siting process to ensure that affected municipalities (town, city, village and counties) have adequate ability to have their needs and impacts addressed.

E. Promote Ecological and Environmental Sustainability

E1. **Expand the disposal ban to other domestic and agricultural universal wastes.** Wisconsin currently requires regulated businesses to recover several commonly used products called "universal wastes" (e.g., lamps, batteries), restricting their disposal because of the potential toxic nature of the products or certain components therein. The objective is to prevent the disposal of residential and agricultural universal waste. Steps to be taken include: (a) updating the statutes and Administrative Code to ban universal waste from landfills and incinerators for all generators, (b) communicating the reasons for new requirements to residential and agricultural generators of universal waste, (c) supporting the establishment of accessible recovery facilities, and (d) expanding the DNR's citation enforcement authority for universal waste.

E2. **Ban the disposal of used oil filters and oil absorbent materials.** The objective is to restrict the disposal of absorbents containing large volumes of waste oil. The principal step to be taken is to enact a landfill ban on used oil filters and other oil-absorbent materials consistent with recommendations made by the Department of Commerce in 2005.

E3. **Develop and adopt a responsible mechanism to dispose of unused pharmaceuticals.** Endocrine disruptors and other pharmaceuticals have been found in Wisconsin waters and fauna. The objective is to provide a responsible way to dispose of unused pharmaceuticals to prevent their uncontrolled release into the environment. The principal step to be taken, until a federal solution is enacted, is to research and develop an effective mechanism to recover and dispose of unused pharmaceuticals.

E4. **Develop appropriate restrictions on open burning and on-site burying.** Land impacts

and air emissions associated with the disposal of garbage generated by single-family residences are a significant concern. The objective is to restrict the disposal of household solid waste on one's own property and to improve state and local enforcement of corresponding laws. Steps to be taken include: (a) authorizing the DNR to issue citations for open burning consistent with current law, (b) promoting a burn barrel education effort, (c) phasing out the statutory exemption that prevents regulation of household waste disposal on one's own property, and (d) phasing out exemptions in the DNR's solid waste and air management programs that allow households to open burn certain solid waste.

E5. **Require state purchasing practices to favor products generated from recycled materials and to promote recycling by vendors.** The objective is to promote the use of recycled materials and to create new market opportunities for Wisconsin business. Steps to be taken include: (a) supporting the development and utilization of recycled materials by requiring the purchase of recycled products by the State of Wisconsin where suitable, (b) giving preference in state purchasing for services to those companies that utilize recycled materials, (c) supporting the development of new recycled and high-recycled content products by Wisconsin companies, (d) increasing "deconstruction" evaluations in state demolition contracts, and (e) requiring state agencies and the University of Wisconsin System to give special consideration to vendors offering take-back programs and to evaluate their waste management practices in general.

Actions Required

In some instances, action might be dictated by legislation or regulatory action to protect human health and the environment. Examples include landfill bans and limitations on the use of certain raw materials (e.g., mercury). Beyond that, the means of resource recovery and waste disposal should be dictated, whenever possible, by an objective look at true social and economic costs. No one method is necessarily favored over another. Also, where there exists a need for uniform statewide policies and procedures, the methods of management should be established by the legislature and appropriate agencies, such as the Department of Natural Resources. Otherwise, policies should be set and enforced by responsible units of government at the local level.

Concluding Remarks

One final observation. These recommendations address a wide variety of seemingly disparate topics. This merely reflects the fact that our assignment touched upon a wide variety of conduct and circumstances, ranging from product creation to use, recovery and disposal. Taken as a whole, however, these recommendations knit together the steps necessary to have an integrated materials management system - a system where producers, consumers and waste handlers anticipate the conduct of one another and act in concert to minimize waste generation, maximize the recovery of resources where economically viable, and dispose of the rest by means that protect human health and the environment.

Many changes are fraught with political challenges, but the recommendations in this report ignore political boundaries and reflect the strong views of members with disparate interests and points of view. Given this diversity of interest, the value of consensus is significant, and the Task Force voted unanimously to make the recommendations set forth in this report. These recommendations are deemed by the Task Force to be in the best interests

of Wisconsin in general, and its natural resources and residents in particular.

The Task Force believes that the implementation of these recommendations as a package would establish a comprehensive strategy for waste minimization, recovery, and disposal in Wisconsin. These recommendations are offered to achieve the vision for Wisconsin set forth by the Task Force and with the recognition that the preferred approach calls upon the creative minds of those with diverse views to balance competing interests while moving forward towards a sustainable waste management system in the best interests of Wisconsin, its people and its natural resources. Now is the time for change. Members of the Task Force stand ready to assist the Governor and policymakers as necessary to help implement these recommendations.

Respectfully submitted this 28th day of December 2006, by the members of the Governor's Task Force on Waste Materials Recovery and Disposal.

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